

Application No. 10/602,515

Filed: June 24, 2003

TC Art Unit: 3744

Confirmation No.: 8865

AMENDMENTS TO THE SPECIFICATION

Please substitute the paragraph below for that on page 8 of the specification beginning at line 32.

As explained above, according to the invention ~~as claimed in claim 1~~, the preserving system comprises a cylinder filled with liquid nitrogen and a preserving vessel, for preserving by cooling biological specimens preserved therein, supplied with the liquid nitrogen from the cylinder, in which the system comprises a Stirling refrigerator or a refrigerator using Gihord-MacMahon cycle and a condensing chamber arranged outside the preserving vessel, and the gas phase part of the condensing chamber is made to communicate with that of the preserving vessel, the liquid phase part of the condensing chamber is made to communicate with that of the preserving vessel, and the cooling part of the refrigerator is arranged inside the condensing chamber. Therefore, the nitrogen vaporized in the preserving vessel is cooled by the cooling part of the Stirling refrigerator in the condensing chamber and liquefied again, and so this liquid nitrogen can be reused for cooling the preserving vessel. Moreover, since the preserving vessel can be cooled by the liquid nitrogen when performing maintenance on the refrigerator, the specimens in the preserving vessel can always be cooled at a predetermined temperature or lower.

Please substitute the paragraph below for that on page 9 of the specification beginning at line 19.

Moreover, according to the invention ~~as claimed in claim 2~~,

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the pressure sensor is arranged in the condensing chamber, and the refrigerator is driven when a detection value of the sensor is a predetermined value or higher than that. Therefore, when the pressure rises to the predetermined value or higher and the vaporized nitrogen needs to be condensed, the refrigerator can be driven, and as a result, the preserving vessel can be cooled with small driving energy.

Please substitute the paragraph below for that on page 9 of the specification beginning at line 27.

Further, according to the invention ~~as claimed in claim 3~~, the liquid phase part of the condensing chamber is set to a position higher than that of the liquid phase part of the preserving vessel. Therefore, the condensed and liquid nitrogen can be returned to the preserving vessel naturally by the self-weight without necessity of using a pump, and this arrangement allows the preserving system to be inexpensive.

Please substitute the paragraph below for that on page 9 of the specification beginning at line 34.

Moreover, according to the invention ~~as claimed in claim 4~~, the condensing chamber is provided with a gas discharge path communicating with each other between the inside and the outside of the condensing chamber, and the gas discharge path is provided with a safety valve for opening the gas discharge path when the pressure in the condensing chamber rises up to a dangerous value of the pressure or higher than that. Therefore, the condensing

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chamber can be prevented as much as possible from being damaged,
by controlling the condensing chamber pressure so that it does not
reach a dangerous pressure.

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